Benchmark System Summary	State: OHIO	MLRA / CRA: 111
		Location Area: West-Central Ohio
Land Use: Cropland		Benchmark System Description
Template Label: Crop 2-6%, SWP		The cropland is somewhat poorly drained on 2-6% slopes (average 3%). Corn and soybeans are grown in rotation. Tillage for soybeans includes fall chiseling followed by two spring secondary operations. Approximately 20% corn residue remains after drilling soybeans. Tillage for corn includes one spring field cultivation with about 10% soybean residue after planting corn. Erosion is above tolerable soil loss of 3 tons/ac/yr. The soil crusts severely and has poor tilth. Wildlife habitat is marginal.
System Name/Phrase: Cropland, 2-6% Slopes, SWP Drained, Silt Loam Soils		

Existing Practices:
Conservation Crop Rotation - 328
0
0
0
0

Resouce Concerns	Benchmark Effects
Soil Erosion; Sheet & Rill	Erosion is above tolerable levels of 3 ton/ac/yr.
Soil Erosion; Concentrated Flow	Ephemeral erosion is occuring in the concentrated flow areas about 18" by 6-8".
Soil Condition; Tilth, Crusting, Infiltration, Organic Matter	Crusting impacts crop emergence and water infiltration.
Water Quantity, Subsurface; Excess Water	The wet soils delay crop planting and impact crop growth and yield.
Water Quality, Surface Water; Pesticides, Nutrients, Organics, Sediment	The high erosion and extensive use of fertilizer and pesticides impact water quality.
Plants, Cropland Productivity	Crops are about 20-30% under yield potential due to tilth and drainage problems.
Animal Habitat, Wildlife: Food, Water, Cover, Shelter	The primary food and cover for wildlife are dichbanks and small wooded areas.
0	
0	
0	
0	

Candidate Practices - Physical Effects	State: OHIO	MLRA / CRA: 111	Page 1 of 2
		Location Area: West-Central Ohio	
Land Use: Cropland		Benchmark System Description	
Template Label: Crop 2-6%, SWP		The cropland is somewhat poorly drained on 2-6% slopes (average 3%). Corn and soybeans are grown in rotation. Tillage for soybeans includes fall chiseling followed by two spring secondary operations. Approximately 20% corn residue remains after drilling soybeans. Tillage for corn includes one spring field cultivation with about 10% soybean residue after planting corn. Erosion is above tolerable soil loss of 3 tons/ac/yr. The soil crusts severely and has poor tilth. Wildlife habitat is marginal.	
System Name/Phrase:	Cropland, 2-6% Slopes, SWP Drained, Silt Loam Soils		

Resource Concerns > / Candidate Practices ST=Short Term LT=Long Term		Soil Erosion; Sheet & Rill	Soil Erosion; Concentrated Flow	Soil Condition; Tilth, Crusting, Infiltration, Organic Matter	Water Quantity, Subsurface; Excess Water	Water Quality, Surface Water; Pesticides, Nutrients, Organics, Sediment	Plants, Cropland Productivity	Animal Habitat, Wildlife: Food, Water, Cover, Shelter
Conservation Crop Rotation - 328	ST	Sl Decrease	Facilitating	Sl Decrease	N/A	Sl Decrease	Sl Decrease	Facilitating
	LT	Sl Decrease	Facilitating	Sl Decrease	N/A	Sl Decrease	Sl Decrease	Facilitating
Cover & Green Manure Crop - 340	ST	Mod Decrease	Sl Decrease	Sl Decrease	Sl Decrease	Mod Decrease	Sl Decrease	Mod Decrease
	LT	Mod Decrease	Sl Decrease	Mod Decrease	Sl Decrease	Mod Decrease	Sl Decrease	Mod Decrease
Contour Buffer Strips - 332	ST	Sl Decrease	Sl Decrease	Sl Decrease	Sl Increase	Mod Decrease	Sl Decrease	Sl Decrease
	LT	Sl Decrease	Sl Decrease	Sl Decrease	Sl Increase	Mod Decrease	Sl Decrease	Sl Decrease
Field Border - 386	ST	N/A	Insignificant	N/A	N/A	Sl Decrease	N/A	Sl Decrease
	LT	N/A	Insignificant	N/A	N/A	Sl Decrease	N/A	Mod Decrease
Filter Strip - 393A	ST	N/A	Insignificant	N/A	N/A	Sig Decrease	N/A	Mod Decrease
	LT	N/A	Insignificant	N/A	N/A	Sig Decrease	N/A	Mod Decrease
Grade Stabilization Structure - 410	ST	N/A	Sl Decrease	N/A	N/A	Sl Decrease	N/A	N/A
	LT	N/A	Sl Decrease	N/A	N/A	Sl Decrease	N/A	N/A
Grassed Waterway - 412	ST	N/A	Sig Decrease	N/A	N/A	Mod Decrease	N/A	Sl Decrease
	LT	N/A	Sig Decrease	N/A	N/A	Mod Decrease	N/A	Sl Decrease
Nutrient Management - 590	ST	Facilitating	N/A	Facilitating	N/A	Sig Decrease	Sl Decrease	Sl Decrease
	LT	Facilitating	N/A	Facilitating	N/A	Sig Decrease	Sl Decrease	Sl Decrease
Pest Management - 595	ST	N/A	N/A	N/A	N/A	Sig Decrease	Sl Decrease	Sl Decrease
	LT	N/A	N/A	N/A	N/A	Sig Decrease	Sl Decrease	Sl Decrease
Residue Management, Mulch till - 329B	ST	Mod Decrease	Sl Decrease	Mod Decrease	Sl Increase	Sig Decrease	Sl Decrease	Sl Decrease
	LT	Mod Decrease	Sl Decrease	Mod Decrease	Sl Increase	Sig Decrease	Mod Decrease	Sl Decrease
Residue Management, No-till & Strip Till - 329A	ST	Sig Decrease	Sl Decrease	Sig Decrease	Sl Increase	Sig Decrease	Mod Decrease	Sl Decrease
	LT	Sig Decrease	Sl Decrease	Sig Decrease	Sl Increase	Sig Decrease	Sig Decrease	Sl Decrease
Subsurface Drain - 606	ST	Sl Decrease	Facilitating	Sl Decrease	Sig Decrease	Sl Increase	Sig Decrease	N/A
	LT	Sl Decrease	Facilitating	Sig Decrease	Sig Decrease	Sl Increase	Sig Decrease	N/A
Water & Sediment Control Basin - 638	ST	Facilitating	Sig Decrease	N/A	N/A	Sig Decrease	N/A	N/A
	LT	Facilitating	Sig Decrease	N/A	N/A	Sig Decrease	N/A	N/A
0	ST							
	LT							
0	ST							
	LT							

Candidate Practices - Physical Effects	State: OHIO	MLRA / CRA: 111	Page 2 of 2
		Location Area: West-Central Ohio	
Land Use: Cropland		Benchmark System Description	
Template Label: Crop 2-6%, SWP		The cropland is somewhat poorly drained on 2-6% slopes (average 3%). Corn and soybeans are grown in rotation. Tillage for soybeans includes fall chiseling followed by two spring secondary operations. Approximately 20% corn residue remains after drilling soybeans. Tillage for corn includes one spring field cultivation with about 10% soybean residue after planting corn. Erosion is above tolerable soil loss of 3 tons/ac/yr. The soil crusts severely and has poor tilth. Wildlife habitat is marginal.	
System Name/Phrase: Cropland, 2-6% Slopes, SWP Drained, Silt Loam Soils			

Resource Concerns >		0	0	0	0	0	0	0
Candidate Practices ST=Short Term LT=Long Term								
Conservation Crop Rotation - 328	ST							
	LT							
Cover & Green Manure Crop - 340	ST						#N/A	
	LT						#N/A	
Contour Buffer Strips - 332	ST							
	LT							
Field Border - 386	ST							
	LT							
Filter Strip - 393A	ST							
	LT							
Grade Stabilization Structure - 410	ST							
	LT							
Grassed Waterway - 412	ST							
	LT							
Nutrient Management - 590	ST							
	LT							
Pest Management - 595	ST							
	LT							
Residue Management, Mulch till - 329B	ST							
	LT							
Residue Management, No-till & Strip Till - 329A	ST							
	LT							
Subsurface Drain - 606	ST							
	LT							
Water & Sediment Control Basin - 638	ST							
	LT							
0	ST							
	LT							
0	ST							
	LT							

Resource Management System #1	State: OHIO	MLRA / CRA: 111	Page 1 of 2
		Location Area: West-Central Ohio	

Land Use:	Cropland
Template Label:	Crop-2-6%, SWP, HT
System Name/Phrase	Cropland, 2-6% Slopes, SWP Drained, Silt Loam, HighTreatment

Alternative Resource Management System #1 Narrative Description

The rotation will be changed to C-Sb-S-Sb-Wheat. The soybeans will be no tilled into the corn stubble. The soybean stubble will be spring field cultivated for corn. The wheat stubble will be fall chiseled for corn. The wheat will be no tilled into Sb residue. Soils will be tested for nutrients and nutrients applied per soil test results. Pesticides will be applied with more care and selection based on runoff risk. The ephemeral erosion will be addressed by the grassed waterways and grade stabilization structures. Filter strips will be established adjacent to the ditches and streams to filter sediment, nutrients, and pesticides. The system working together will address the resource concerns.

Resource Concerns > / Candidate Practices ST=Short Term LT=Long Term		Soil Erosion; Sheet & Rill	Soil Erosion; Concentrated Flow	Soil Condition; Tilth, Crusting, Infiltration, Organic Matter	Water Quantity, Subsurface; Excess Water	Water Quality, Surface Water; Pesticides, Nutrients, Organics, Sediment	Plants, Cropland Productivity	Animal Habitat, Wildlife: Food, Water, Cover, Shelter
Conservation Crop Rotation - 328	ST	+1	+	+1	N/A	+1	+1	+
	LT	+1	+	+1	N/A	+1	+1	+
Filter Strip - 393A	ST	N/A	0	N/A	N/A	+3	N/A	+2
	LT	N/A	0	N/A	N/A	+3	N/A	+2
Grade Stabilization Structure - 410	ST	N/A	+1	N/A	N/A	+1	N/A	N/A
	LT	N/A	+1	N/A	N/A	+1	N/A	N/A
Grassed Waterway - 412	ST	N/A	+3	N/A	N/A	+2	N/A	+1
	LT	N/A	+3	N/A	N/A	+2	N/A	+1
Nutrient Management - 590	ST	+	N/A	+	N/A	+3	+1	+1
	LT	+	N/A	+	N/A	+3	+1	+1
Pest Management - 595	ST	N/A	N/A	N/A	N/A	+3	+1	+1
	LT	N/A	N/A	N/A	N/A	+3	+1	+1
Residue Management, Mulch till - 329B	ST	+2	+1	+2	-1	+3	+1	+1
	LT	+2	+1	+2	-1	+3	+2	+1
Residue Management, No-till & Strip Till - 329A	ST	+3	+1	+3	-1	+3	+2	+1
	LT	+3	+1	+3	-1	+3	+3	+1
Subsurface Drain - 606	ST	+1	+	+1	+3	-1	+3	N/A
	LT	+1	+	+3	+3	-1	+3	N/A
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0

Resource Management System #1	State: OHIO	MLRA / CRA: 111	Page 2 of 2
		Location Area: West-Central Ohio	

Land Use:	Cropland
Template Label:	Crop-2-6%, SWP, HT
System Name/Phrase	Cropland, 2-6% Slopes, SWP Drained, Silt Loam, HighTreatment

Alternative Resource Management System #1 Narrative Description

The rotation will be changed to C-Sb-S-Sb-Wheat. The soybeans will be no tilled into the corn stubble. The soybean stubble will be spring field cultivated for corn. The wheat stubble will be fall chiseled for corn. The wheat will be no tilled into Sb residue. Soils will be tested for nutrients and nutrients applied per soil test results. Pesticides will be applied with more care and selection based on runoff risk. The ephemeral erosion will be addressed by the grassed waterways and grade stabilization structures. Filter strips will be established adjacent to the ditches and streams to filter sediment, nutrients, and pesticides. The system working together will address the resource concerns.

Resource Concerns >		0	0	0	0	0		
Candidate Practices ST=Short Term LT=Long Term								
Conservation Crop Rotation - 328	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Filter Strip - 393A	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Grade Stabilization Structure - 410	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Grassed Waterway - 412	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Nutrient Management - 590	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Pest Management - 595	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Residue Management, Mulch till - 329B	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Residue Management, No-till & Strip Till - 329A	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Subsurface Drain - 606	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		

Resource Management System #2	State: OHIO	MLRA / CRA: 111	Page 1 of 2
		Location Area: West-Central Ohio	

Land Use: Cropland

Template Label: Crop MT

System Name/Phrase: Cropland, 2-6% Slopes, SWP Drained, Silt Loam, Medium Treatment

Alternative Resource Management System #2 Narrative Description

The rotation will be changed to C-Sb-S-Sb-Wheat. The soybeans will be no tilled into the corn stubble. The soybean stubble will be spring field cultivated for corn. The wheat stubble will be fall chiseled for corn. The wheat will be no tilled into Sb residue. Soils will be tested for nutrients and nutrients applied per soil test results. Pesticides will be applied with more care and selection based on runoff risk. The ephemeral erosion will be addressed by the grassed waterways and grade stabilization structures. The system working together will address the resource concerns.

Resource Concerns > / Candidate Practices ST=Short Term LT=Long Term		Soil Erosion; Sheet & Rill	Soil Erosion; Concentrated Flow	Soil Condition; Tilth, Crusting, Infiltration, Organic Matter	Water Quantity, Subsurface; Excess Water	Water Quality, Surface Water; Pesticides, Nutrients, Organics, Sediment	Plants, Cropland Productivity	Animal Habitat, Wildlife: Food, Water, Cover, Shelter
Conservation Crop Rotation - 328	ST	+1	+	+1	N/A	+1	+1	+
	LT	+1	+	+1	N/A	+1	+1	+
Grade Stabilization Structure - 410	ST	N/A	+1	N/A	N/A	+1	N/A	N/A
	LT	N/A	+1	N/A	N/A	+1	N/A	N/A
Grassed Waterway - 412	ST	N/A	+3	N/A	N/A	+2	N/A	+1
	LT	N/A	+3	N/A	N/A	+2	N/A	+1
Nutrient Management - 590	ST	+	N/A	+	N/A	+3	+1	+1
	LT	+	N/A	+	N/A	+3	+1	+1
Pest Management - 595	ST	N/A	N/A	N/A	N/A	+3	+1	+1
	LT	N/A	N/A	N/A	N/A	+3	+1	+1
Residue Management, Mulch till - 329B	ST	+2	+1	+2	-1	+3	+1	+1
	LT	+2	+1	+2	-1	+3	+2	+1
Residue Management, No-till & Strip Till - 329A	ST	+3	+1	+3	-1	+3	+2	+1
	LT	+3	+1	+3	-1	+3	+3	+1
Subsurface Drain - 606	ST	+1	+	+1	+3	-1	+3	N/A
	LT	+1	+	+3	+3	-1	+3	N/A
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0

Resource Management System #2		State: OHIO	MLRA / CRA: 111	Page 2 of 2
			Location Area: West-Central Ohio	
Land Use: Cropland		Alternative Resource Management System #2 Narrative Description		
Template Label: Crop MT		The rotation will be changed to C-Sb-S-Sb-Wheat. The soybeans will be no tilled into the corn stubble. The soybean stubble will be spring field cultivated for corn. The wheat stubble will be fall chiseled for corn. The wheat will be no tilled into Sb residue. Soils will be tested for nutrients and nutrients applied per soil test results. Pesticides will be applied with more care and selection based on runoff risk. The ephemeral erosion will be addressed by the grassed waterways and grade stabilization structures. The system working together will address the resource concerns.		
System Name/Phrase: Cropland, 2-6% Slopes, SWP Drained, Silt Loam, Medium Treatment				

Resource Concerns >		0	0	0	0	0		
Candidate Practices ST=Short Term LT=Long Term								
Conservation Crop Rotation - 328	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Grade Stabilization Structure - 410	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Grassed Waterway - 412	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Nutrient Management - 590	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Pest Management - 595	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Residue Management, Mulch till - 329B	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Residue Management, No-till & Strip Till - 329A	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Subsurface Drain - 606	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		

Resource Management System #3		State: OHIO	MLRA / CRA: 111				Page 1 of 2
			Location Area: West-Central Ohio				
Land Use: Cropland		**Alternative Resource Management System #3 Narrative Description**					
Template Label: Crop - LT		The rotation will be changed to C-Sb-S-Sb-Wheat. The soybeans will be no tilled into the corn stubble. The soybean stubble will be spring field cultivated for corn. The wheat stubble will be fall chiseled for corn. The wheat will be no tilled into Sb residue. Soils will be tested for nutrients and nutrients applied per soil test results. Pesticides will be applied with more care and selection based on runoff risk. The ephemeral erosion will be addressed by the grassed waterways and grade stabilization structures. Mulch tillage will be used to address the delayed planting for corn, The system working together will address the resource concerns.					
System Name/Phrase: Cropland, 2-6% Slopes, SWP Drained, Silt Loams, Low Treatment							

Resource Concerns > / Candidate Practices / ST=Short Term LT=Long Term		Soil Erosion; Sheet & Rill	Soil Erosion; Concentrated Flow	Soil Condition; Tilth, Crusting, Infiltration, Organic Matter	Water Quantity, Subsurface; Excess Water	Water Quality, Surface Water; Pesticides, Nutrients, Organics, Sediment	Plants, Cropland Productivity	Animal Habitat, Wildlife: Food, Water, Cover, Shelter
Conservation Crop Rotation - 328	ST	+1	+	+1	N/A	+1	+1	+
	LT	+1	+	+1	N/A	+1	+1	+
Grade Stabilization Structure - 410	ST	N/A	+1	N/A	N/A	+1	N/A	N/A
	LT	N/A	+1	N/A	N/A	+1	N/A	N/A
Grassed Waterway - 412	ST	N/A	+3	N/A	N/A	+2	N/A	+1
	LT	N/A	+3	N/A	N/A	+2	N/A	+1
Nutrient Management - 590	ST	+	N/A	+	N/A	+3	+1	+1
	LT	+	N/A	+	N/A	+3	+1	+1
Pest Management - 595	ST	N/A	N/A	N/A	N/A	+3	+1	+1
	LT	N/A	N/A	N/A	N/A	+3	+1	+1
Residue Management, Mulch till - 329B	ST	+2	+1	+2	-1	+3	+1	+1
	LT	+2	+1	+2	-1	+3	+2	+1
Residue Management, No-till & Strip Till - 329A	ST	+3	+1	+3	-1	+3	+2	+1
	LT	+3	+1	+3	-1	+3	+3	+1
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0
0	ST	0	0	0	0	0	0	0
	LT	0	0	0	0	0	0	0

Resource Management System #3		State: OHIO	MLRA / CRA: 111	Page 2 of 2
			Location Area: West-Central Ohio	
Land Use: Cropland		Alternative Resource Management System #3 Narrative Description		
Template Label: Crop - LT		The rotation will be changed to C-Sb-S-Sb-Wheat. The soybeans will be no tilled into the corn stubble. The soybean stubble will be spring field cultivated for corn. The wheat stubble will be fall chiseled for corn. The wheat will be no tilled into Sb residue. Soils will be tested for nutrients and nutrients applied per soil test results. Pesticides will be applied with more care and selection based on runoff risk. The ephemeral erosion will be addressed by the grassed waterways and grade stabilization structures. Mulch tillage will be used to address the delayed planting for corn, The system working together will address the resource concerns.		
System Name/Phrase: Cropland, 2-6% Slopes, SWP Drained, Silt Loams, Low Treatment				

Resource Concerns >		0	0	0	0	0		
Candidate Practices ST=Short Term LT=Long Term								
Conservation Crop Rotation - 328	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Grade Stabilization Structure - 410	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Grassed Waterway - 412	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Nutrient Management - 590	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Pest Management - 595	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Residue Management, Mulch till - 329B	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
Residue Management, No-till & Strip Till - 329A	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		
0	ST	0	0	0	0	0		
	LT	0	0	0	0	0		